

CLAIMS

What is claimed:

1. Apparatus for controlling pipeline televising equipment comprising a power control unit having at least one input plug, the apparatus including:
 - 5 -a communication module having an output plug substantially identical to the input plug, such module including a receiving antenna; and
 - a wireless master control module including a transmitting antenna; and wherein:
 - the control module includes at least two actuators, one each for panning and
 - 10 for tilting a pipeline television camera.
2. The apparatus of claim 1 wherein the actuators are first and second actuators and the control module includes a third actuator for energizing a tractor carrying the camera.
- 15 3. The apparatus of claim 2 wherein:
 - the master control module includes a radio-frequency transmitter coupled to the transmitting antenna; and
 - when the first actuator is manipulated, the transmitting antenna radiates a
 - 20 signal having a frequency between about 10KHz and about 6 GHz.
4. The apparatus of claim 3 wherein:
 - when either one of the second and third actuators is manipulated, the transmitting antenna radiates a signal having a frequency between about 10KHz and
 - 25 about 6GHz.
5. The apparatus of claim 4 wherein the transmitting antenna radiates a signal having a frequency between about 400MHz and 430Mhz.
- 30 6. The apparatus of claim 4 wherein the signal is an on-off keyed signal.
7. The apparatus of claim 1 further including the pipeline televising camera.

8. In a pipeline televising system including:

-a power control module having (a) a power control unit, (b) a digital display unit, (c) a video cassette recorder, and (d) a television monitor; and

5 -a pipeline televising camera cable-tethered to the power control unit through a power line modem;

the improvement wherein:

-the power control module includes a communication section having a receiving antenna; and

-the system includes a master control module having a transmitting antenna.

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9. The system of claim 8 wherein:

-the master control module includes an actuator for panning the camera; and

-when the actuator is manipulated, a radio frequency signal radiates from the transmitting antenna and is received by the receiving antenna.

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10. The system of claim 9 wherein:

-the transmitting and receiving antennae are separated by an opaque barrier;

and

-when the radio frequency signal propagates from the transmitting antenna,

20 such signal penetrates the barrier.

11. The system of claim 10 wherein:

-the transmitting antenna radiates a signal; and

-the signal has a frequency between about 400 MHz and about 430MHz.

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12 A method for televising the interior of a pipeline including the steps of:
-providing a pipeline televising system having (a) a tractor-mounted
television camera, (b) a power control unit cable-coupled to the camera, and (c) a
communication module cable-coupled to the power control unit and having a
5 receiving antenna mounted thereon;
-moving the tractor-mounted camera into a pipeline;
-manipulating at least one actuator on a master control module having a
transmitting antenna; and,
-transmitting a radio frequency signal from the master control module to the
10 communication module.

13 The method of claim 12 wherein:
-the pipeline includes a manhole;
-the moving step includes lowering the tractor-mounted camera through the
15 manhole; and
-the manipulating step is carried out adjacent to the manhole.

14. The method of claim 13 wherein the lowering and manipulating steps are
carried out within 10 feet of the manhole.
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15. The method of claim 14 wherein the system has an operator and the
manipulating step is carried out by the operator while viewing the tractor-mounted
camera.

25 16. The method of claim 12 wherein the manipulating step commands the
tractor to move forward inside the pipeline and the method further includes the steps
of:

-moving the master control module to a location which is greater than a
predetermined distance from the communication module; and
30 -disabling the tractor.

17. The method of claim 12 wherein the pipeline televising system includes an opaque barrier between the transmitting and receiving antennas and the transmitting step includes transmitting the radio frequency signal through the barrier.

5 18. The method of claim 12 wherein the radio frequency signal is an on-off keyed signal.

19. The method of claim 17 wherein the radio frequency signal is an on-off keyed signal.

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